

SM101 THRU SM107

CURRENT 1.0 Ampere
VOLTAGE 50 to 1000 Volts

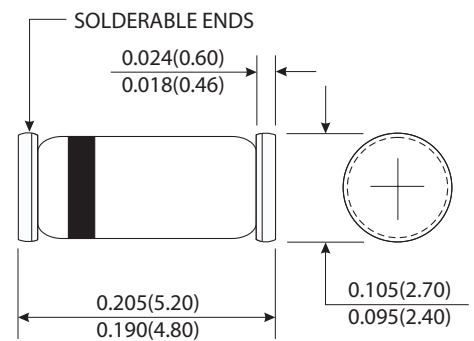
Features

- The plastic package carries Underwrites Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Glass passivated junction
- High temperature soldering guaranteed: 250°C/10 seconds, at terminals

Mechanical Data

- Case : JEDEC MELF(DO-41) molded plastic body
- Terminals : Lead solderable per MIL-STD-750, method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight : 0.0041 ounce, 0.116 gram

MELF (DO-41)



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

(Ratings at 25 °C ambient temperature unless otherwise specified, Single phase, half wave 60Hz, resistive or inductive load. For capacitive load, derate by 20%)

		Symbols	SM101	SM102	SM103	SM104	SM105	SM106	SM107	Units
Maximum recurrent peak reverse voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage		V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage		V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length at TA=55 °C		I(AV)	1.0							Amp
Peak forward surge current 8.3ms half sine wave superimposed on rated load (JEDEC method)		I _{FSM}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A		V _F	1.3							Volts
Maximum DC reverse current at rated DC blocking voltage	TA=25 °C	I _R	50							μA
	TA=100 °C		100							
Maximun reverse recovery time (Note 1)		trr	150				250	500		ns
Typical thermal resistance (Note 2)		RθJA	5.0							°C/W
Operating and storage temperature range		TJ TSTG	-55 to +175							°C

Notes:

- (1) Reverse recovery time test condition : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
- (2) Measured at 1MHz and applied reverse voltage of 4.0V DC.

RATINGS AND CHARACTERISTIC CURVES SM101 THRU SM107

FIG.1-TYPICAL FORWARD CHARACTERISTICS

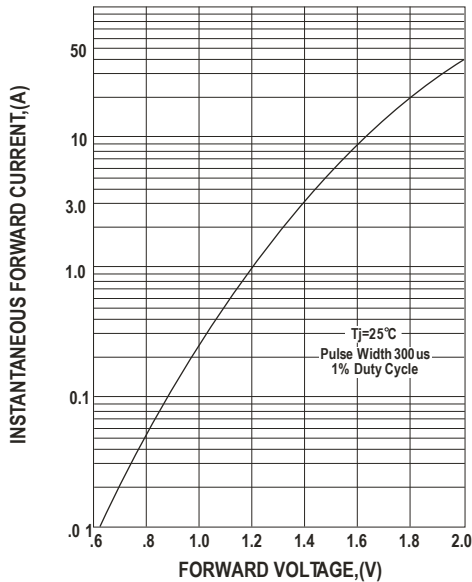


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

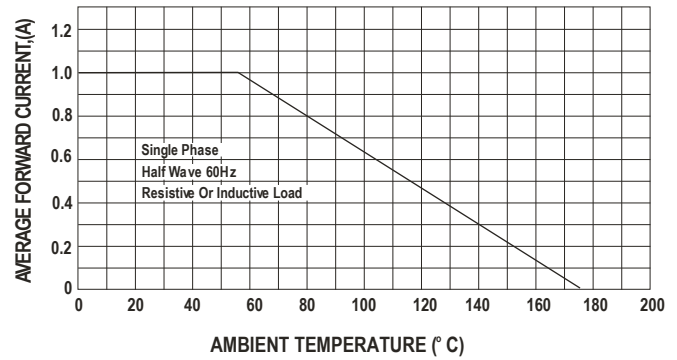
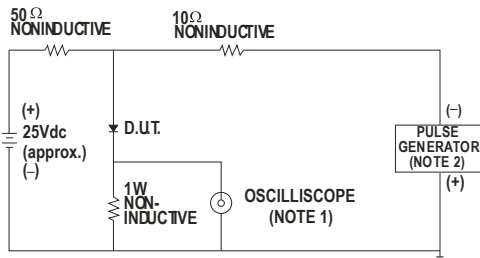


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time = 7ns max., Input Impedance = 1 megohm. 22pF.
2. Rise Time = 10ns max., Source Impedance = 50 ohms.

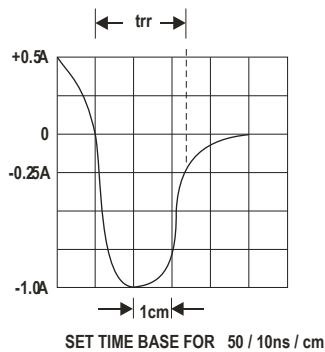


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

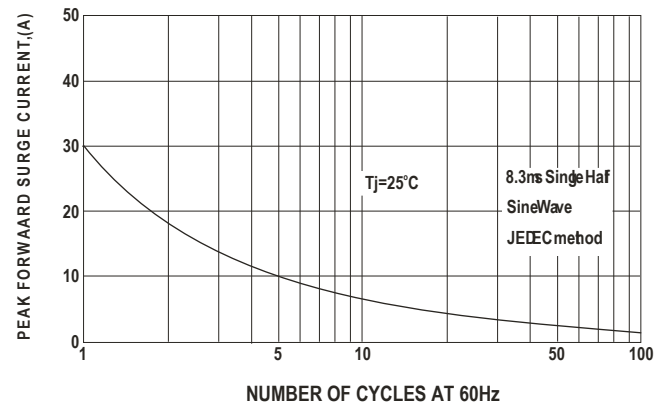


FIG.5-TYPICAL JUNCTION CAPACITANCE

